

**FREY ENVIRONMENTAL, INC.**

Environmental Geologists, Engineers, Assessors

March 27, 1998  
172-01

Wendy Liu  
Regional Water Quality Control Board  
Los Angeles Region  
101 Centre Plaza Drive  
Monterey Park, California 91754-2156

**GROUNDWATER MONITORING WELL SAMPLING  
FORMER MONDO CHROME FACILITY  
4933 FIRESTONE BOULEVARD  
SOUTH GATE, CALIFORNIA**

Dear Ms. Liu

This letter presents the results of groundwater sampling activities at the site of the former Mondo Chrome facility located at 4933 Firestone Boulevard in South Gate, California (Figure 1).

**SUMMARY OF ACTIVITIES**

On March 18, 1998, vapor extraction well VEW1 (Figure 2) was measured for depth to water and checked for the presence of light non-aqueous phase liquids (LNAPLs). LNAPLs were not detected in well VEW1. Groundwater was measured at a depth of 43.28 feet below the top of casing. Well VEW1 was then purged and sampled according to the procedures presented in Appendix A.

Groundwater samples were analyzed for halogenated volatile organic compounds in general accordance with EPA Method No. 8021A. Groundwater samples were also analyzed for total chromium and cadmium in general accordance with EPA Method No. 6010A and for hexavalent chromium in general accordance with EPA Method No. 7196. In addition, groundwater samples were analyzed for pH and turbidity in general accordance with EPA Method No. 150.1 and 180.1, respectively.

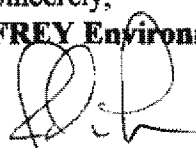
Groundwater purged from the well is being temporarily stored on-Site in a 55-gallon drum. The purged groundwater will be transported and disposed of at a State-certified recycling facility at a later date.

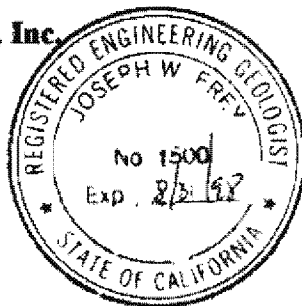
## RESULTS


- o Trichloroethene (TCE), tetrachloroethene (PCE), cis-1,2-Dichloroethene (cis-1,2-DCE) and 1,1-Dichloroethene (1,1-DCE) were detected at concentrations of 510 micrograms per liter (ug/L), 370 ug/L, 4 ug/L and 2 ug/L, respectively. No other compounds analyzed as part of EPA Method No. 8010 were detected in the groundwater sample collected from VEW1.
- o Cadmium and total chromium were detected at concentrations of 0.11 milligrams per liter (mg/L) and 0.45 mg/L, respectively.
- o Hexavalent chromium was not detected above the laboratory detection limit of 0.02 mg/L
- o Turbidity and pH were measured at 8,550 nephelometric turbidity (NTUs) and 7.27 (unitless), respectively. Laboratory reports are presented in Appendix B.

Sincerely,

**FREY Environmental, Inc.**

  
Joe Frey  
Principal Certified  
Engineering Geologist  
CEG #1500



  
Evan Privett  
Senior Project Geologist

Enclosures:

Figure 1 - Location Map

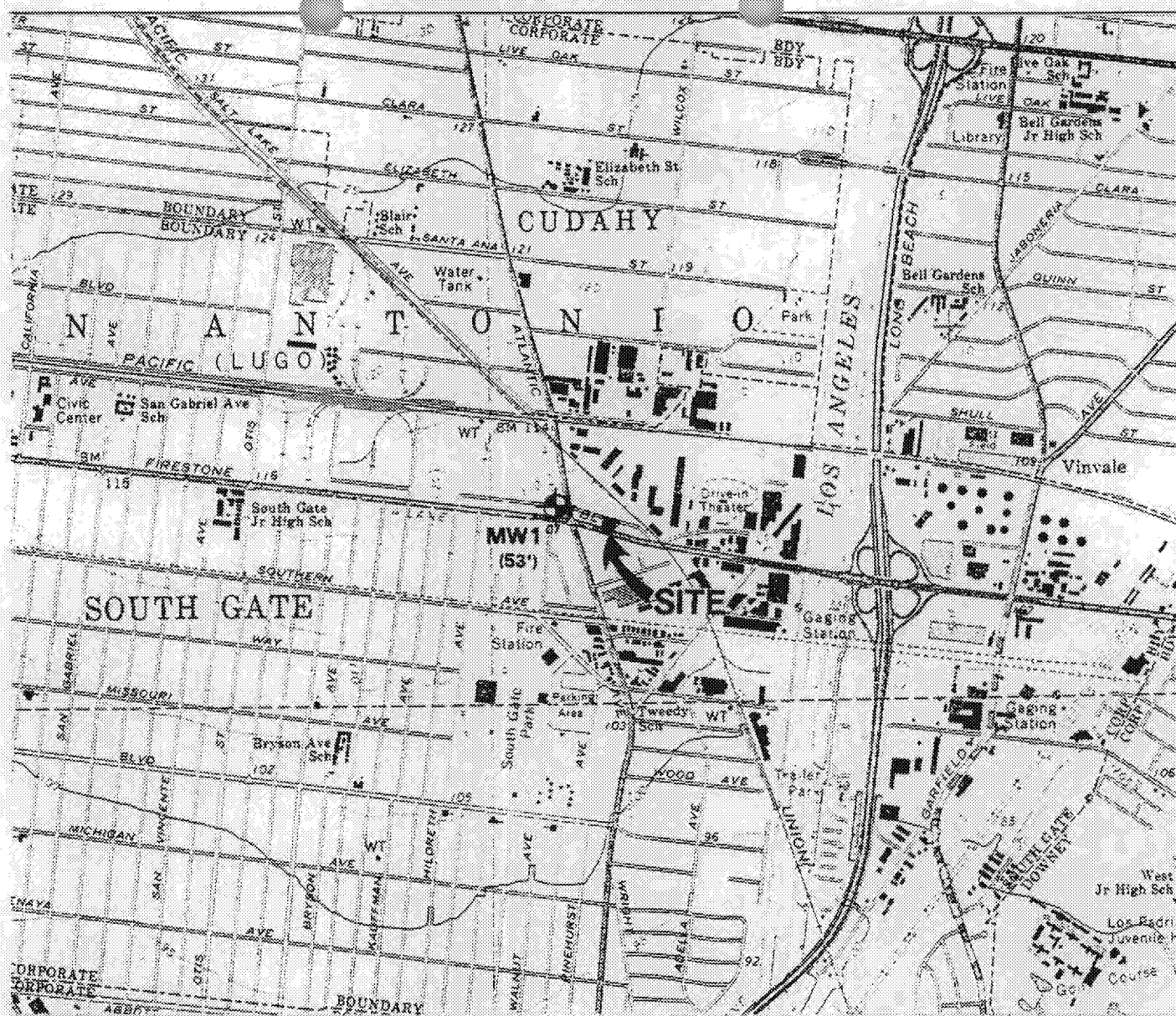
Figure 2 - Site Sketch Showing Soil Boring and Well Locations

Appendix A - Field Procedures

Appendix B- Laboratory Results

cc: Mr. Howard Kay  
The Kay Companies  
475 Seventeenth Street  
Suite 940  
Denver, California 80202

## FIGURES



### EXPLANATION

◆ Groundwater well UNOCAL property

MW1 Well number

(53') Depth to groundwater in feet MSL (1994)



NORTH



SCALE IN MILES

FORMER MONDO CHROME FACILITY  
4933 FIRESTONE BOULEVARD  
SOUTH GATE, CALIFORNIA

Client: TEDESCO LEASING

Project No.: 172-01

**FREY ENVIRONMENTAL, INC.**

### NOTES:

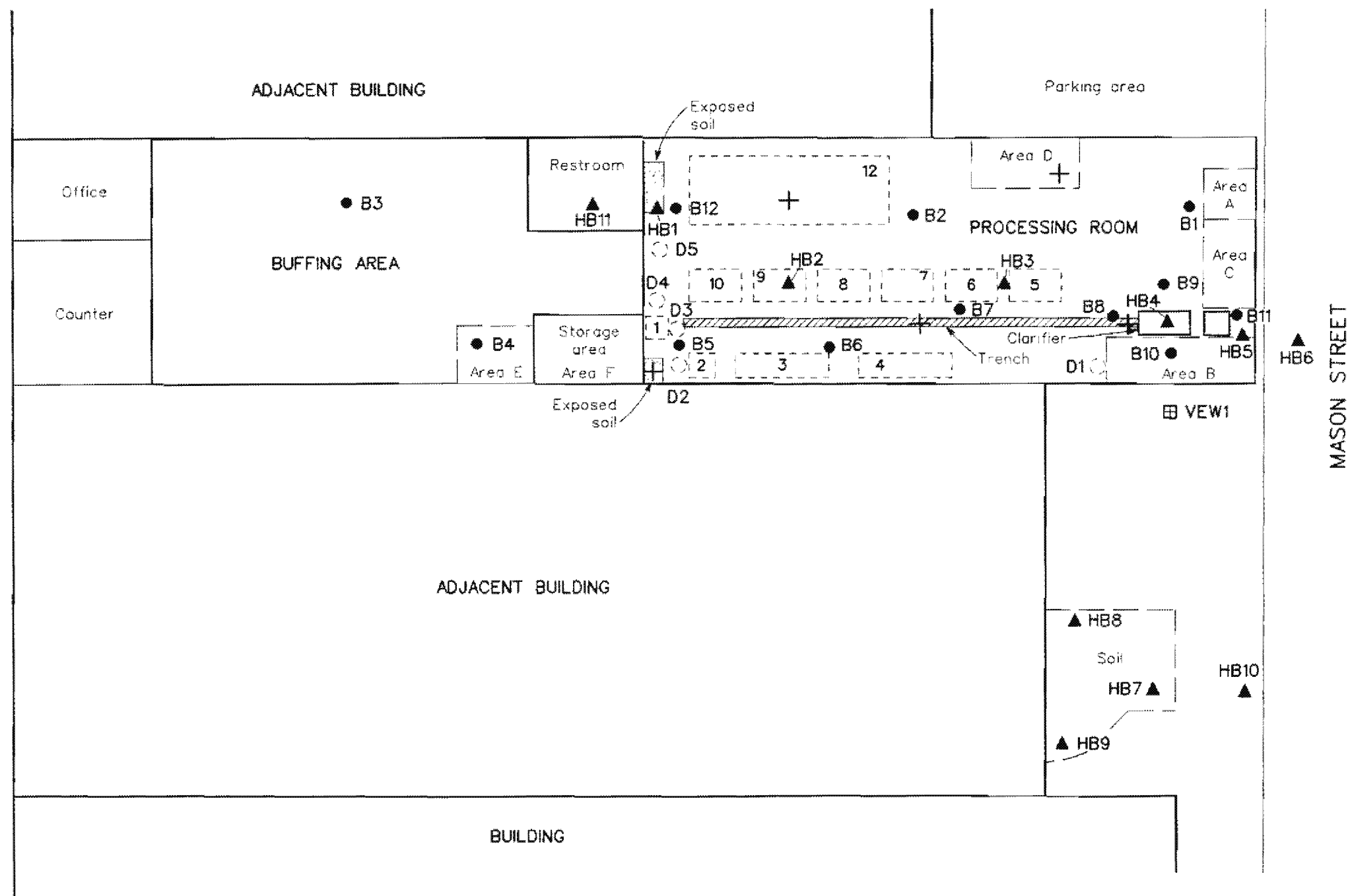
- 1) All locations and dimensions are approximate.
- 2) Base map from USGS 7.5 minute South Gate (1966, photorevised 1981), California topographic quadrangle.
- 3) Groundwater well data from FUGRO West, Inc., project no. 94-48-1320.

**SITE LOCATION MAP**

Date: JANUARY 1996

Figure: 1

FIRESTONE BOULEVARD

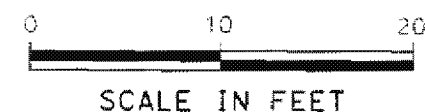


## EXPLANATION

- [5] FORMER ABOVE GROUND PROCESS TANK LOCATION
- ▲ HB6 HAND AUGER BORING LOCATION
- B11 BORING LOCATION
- D3 FORMER DRUM/MISCELLANEOUS CONTAINER LOCATION AND DESIGNATION
- ▣ VEW1 PROPOSED VAPOR EXTRACTION WELL LOCATION
- ✚ PROPOSED SOIL SAMPLING LOCATION

### NOTES:

- 1) All locations and dimensions are approximate.
- 2) Base map from Proposed Site Assessment, Former Mondo Chrome Facility, by Fugro West, Inc., project no. 94-48-1320, dated August 1994.



FORMER MONDO CHROME FACILITY  
4933 FIRESTONE BOULEVARD  
SOUTH GATE, CALIFORNIA

Client: TEDESCO LEASING

Project No.: 172-01

**FREY ENVIRONMENTAL, INC.**

SITE SKETCH  
SHOWING PROPOSED VAPOR EXTRACTION WELL  
AND SOIL SAMPLE LOCATIONS

Date: JANUARY 1996

Figure 2

**APPENDIX A**  
**FIELD PROCEDURES/WATER SAMPLING DATA FORMS**

## **WELL PURGING AND GROUND WATER SAMPLING**

1. The well head condition was inspected for evidence of tampering or damage prior to purging the vapor extraction well.
2. The water level in the well was recorded using a conductance probe prior to well purging. A clear bailer sample was taken and visually inspected for turbidity and the presence of free product.
3. The vapor extraction well was purged of at least twice the water content of the casing and filter pack using a stainless steel bailer. A bailer with a diameter slightly less than the casing internal diameter was lowered into the well, allowed to fill with water and removed. The process was repeated eight times. An attempt was made to purge the well using a stainless steel submersible pump. However, an insufficient amount of water was present in the well to allow for pumping.
4. The well was allowed to recover to its original well volume.
5. The ground water samples were collected using a stainless steel bailer held by dedicated nylon line.
6. The water level and depth to the bottom of the well were measured using a conductance probe and a fiber measuring tape.
7. All items entering the well; tapes, conductance probe, bailers were cleaned prior to use and between sampling periods.
8. Groundwater collected from each monitoring well was placed into EPA approved, zero head space, 40 ml vials and one liter containers.
9. Each sample was labeled.
10. The samples were placed in a bag, and into an ice chest, and cooled following collection.
11. The samples were delivered to the laboratory directly after collection. Sample handling, transport, and delivery to the laboratory were documented using chain of custody procedures and appropriate Chain-of-Custody forms.
12. Ground water purged from the vapor extraction well is currently being stored at the site in labeled, DOT approved 55 gallon drums.

**APPENDIX B**  
**LABORATORY RESULTS**



## Page 4 of 4

D. 3/10/98

SAMPLING PERSONNEL *D. H. L.*

TIME	ELAPSED TIME	GALLONS PURGED	ph	Temp (deg. F)	Cond.	Turbidity	COMMENTS
10:00							Begin B.O. 1
10:05	05	1	7.39	69.9	2160	>200	Smelly
10:10	10	1	7.41	70.0	1940	>200	"
10:20	10	1	7.40	70.1	2060	>200	"
							Finish B.O. 1
TOTAL GALLONS PURGED		3					

SAMPLE DEPTH (FT)	43.79	PURGE METHOD	4" HD BR. /	PURGE PUMPING RATE (GPM)
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FIELD EQUIPMENT	MODEL NAME/ DESCRIPTION
pH Meter/EC Meter	Hanna #1
Turbidity Meter	La Motte
Pump (Dia./Type)	NA
Water Level Meter	Solinst #1
Bailer (Dia.x length)	1.5x36" Stn. w/ hat

SAMPLE NUMBER	# BOTTLES
VEN1-W1	(3) 40 ml
VEN1-W2	(2) 1 qt

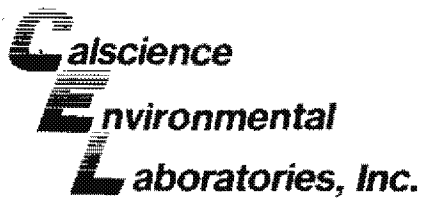
(Water Column Thickness) (Multiplier) = One Well Volume in Gallons

4-INCH WELL: (                  Ft) x (0.65) =                  Gallons

3 Well Volumes = Gallons

2-INCH WELL: ( 0.92 Ft) x (0.16) = 0.15 Gallons

3 Well Volumes = 20.5 Gallons



March 24, 1998

Evan Privett  
Frey Environmental, Inc.  
2817-A Lafayette Avenue  
Newport Beach, CA 92663

Subject: **Calscience Work Order Number: 98-03-566**  
Client Reference: **Mondo Chrome/172-01**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 03/18/98 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested, and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Burley".

Calscience Environmental  
Laboratories, Inc.  
Don Burley  
Project Manager

A handwritten signature in black ink, appearing to read "William H. Christensen".

William H. Christensen  
Deliverables Manager

**ANALYTICAL REPORT**

Frey Environmental, Inc.  
2817-A Lafayette Avenue  
Newport Beach, CA 92663

Date Sampled: 03/18/98  
Date Received: 03/18/98  
Date Analyzed: 03/18/98

Attn: Evan Privett  
RE: Mondo Chrome/172-01

Work Order No.: 98-03-566  
Method: EPA 7196A  
Page 1 of 1

All concentrations are reported in mg/L (ppm).

<u>Sample Number</u>	<u>Chromium VI Concentration</u>	<u>Reporting Limit</u>
VEW1-W2	ND	0.02
Method Blank	ND	0.02

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.

**ANALYTICAL REPORT**

Frey Environmental, Inc.  
2817-A Lafayette Avenue  
Newport Beach, CA 92663

Date Sampled: 03/18/98  
Date Received: 03/18/98  
Date Analyzed: 03/18/98

Attn: Evan Privett  
RE: Mondo Chrome/172-01

Work Order No.: 98-03-566  
Method: EPA 150.1  
Page 1 of 1

All values are reported in pH units.

<u>Sample Number</u>	<u>pH</u>	<u>Reporting Limit</u>
VEW-W2	7.27	0.01

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.



**ANALYTICAL REPORT**

Frey Environmental, Inc.  
2817-A Lafayette Avenue  
Newport Beach, CA 92663

Date Sampled: 03/18/98  
Date Received: 03/18/98  
Date Analyzed: 03/18/98

Attn: Evan Privett  
RE: Mondo Chrome/172-01

Work Order No.: 98-03-566  
Method: EPA 180.1  
Page 1 of 1

All results are reported in NTU.

<u>Sample Number</u>	<u>Turbidity</u>	<u>Reporting Limit</u>
VEW-W2	8550	100

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.



Frey Environmental, Inc.  
2817-A Lafayette Avenue  
Newport Beach, CA 92663

Date Sampled: 03/18/98  
Date Received: 03/18/98  
Date Digested: 03/19/98  
Date Analyzed: 03/20/98  
Work Order No.: 98-03-566

Attn: Evan Privett  
RE: Mondo Chrome/172-01

Page 1 of 1

All concentrations are reported in mg/L (ppm). Analyses for metals were conducted on a total digestion.

<u>Analyte</u>	<u>Method</u>	<u>Concentration</u>	<u>Reporting Limit</u>
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**Sample Number: VEW-W2**

Cadmium	EPA 6010A	0.11	0.02
Chromium	EPA 6010A	0.45	0.03

**Sample Number: Method Blank**

Cadmium	EPA 6010A	ND	0.02
Chromium	EPA 6010A	ND	0.03

ND denotes not detected at indicated reportable limit.

Each sample was received by CEL chilled, intact, and with chain-of-custody attached.



**QUALITY ASSURANCE SUMMARY**  
ICP / GF Metals (Aqueous)

Frey Environmental, Inc.  
Page 1 of 1

Work Order No.: 98-03-566  
Date Analyzed: 03/20/98

**Matrix Spike/Matrix Spike Duplicate**

Sample Spiked: 98-03-582-1

<u>Analyte</u>	<u>Method</u>	<u>MS%REC</u>	<u>MSD%REC</u>	<u>Control Limits</u>	<u>%RPD</u>	<u>Control Limits</u>
Cadmium	EPA 6010A	105	106	80 - 120	1	0 - 20
Chromium	EPA 6010A	93	91	80 - 120	2	0 - 20



**ANALYTICAL REPORT**  
EPA 8021A Halogenated VOCs

Client Name:	Frey Environmental, Inc.	Date Collected:	03/18/98
Project ID:	Mondo Chrome/172-01	Date Received:	03/18/98
Work Order Number:	98-03-566	Date Prepared:	N/A
QC Batch ID:	980319W	Date Analyzed:	03/19/98
Matrix:	Aqueous		
Preparation:	N/A		
Method:	EPA 8021A		

Client Sample Number: **VEW1-W1**  
Lab Sample Number: 98-03-566-1

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>Qualifiers</u>	<u>Units</u>
Dichlorodifluoromethane	ND	1		ug/L
Chloromethane	ND	1		ug/L
Vinyl Chloride	ND	1		ug/L
Bromomethane	ND	1		ug/L
Chloroethane	ND	1		ug/L
Trichlorofluoromethane	ND	1		ug/L
1,1-Dichloroethene	2	1		ug/L
Methylene Chloride	ND	1		ug/L
t-1,2-Dichloroethene	ND	1		ug/L
1,1-Dichloroethane	ND	1		ug/L
c-1,2-Dichloroethene	4	1		ug/L
Chloroform	ND	1		ug/L
1,2-Dichloroethane	ND	1		ug/L
1,1,1-Trichloroethane	ND	1		ug/L
Carbon Tetrachloride	ND	1		ug/L
1,2-Dichloropropane	ND	1		ug/L
Trichloroethene	510	20		ug/L
Bromodichloromethane	ND	1		ug/L
2-Chloroethyl Vinyl Ether	ND	1		ug/L
c-1,3-Dichloropropene	ND	1		ug/L
t-1,3-Dichloropropene	ND	1		ug/L
1,1,2-Trichloroethane	ND	1		ug/L
Dibromochloromethane	ND	1		ug/L
Tetrachloroethene	370	20		ug/L
Chlorobenzene	ND	1		ug/L
Bromoform	ND	1		ug/L
1,1,2,2-Tetrachloroethane	ND	1		ug/L
1,3-Dichlorobenzene	ND	1		ug/L
1,4-Dichlorobenzene	ND	1		ug/L
1,2-Dichlorobenzene	ND	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Chloropropane	97	65-135	
1-Chloro-3-Fluorobenzene	89	65-135	



**ANALYTICAL REPORT**  
EPA 8021A Halogenated VOCs

Client Name:	Frey Environmental, Inc.	Date Collected:	N/A
Project ID:	Mondo Chrome/172-01	Date Received:	N/A
Work Order Number:	98-03-566	Date Prepared:	N/A
QC Batch ID:	980319W	Date Analyzed:	03/19/98
Matrix:	Aqueous		
Preparation:	EPA 5030A		
Method:	EPA 8021A		

**Client Sample Number:**      **Method Blank**  
**Lab Sample Number:**      095-01-032-140

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>Qualifiers</u>	<u>Units</u>
Dichlorodifluoromethane	ND	1		ug/L
Chloromethane	ND	1		ug/L
Vinyl Chloride	ND	1		ug/L
Bromomethane	ND	1		ug/L
Chloroethane	ND	1		ug/L
Trichlorofluoromethane	ND	1		ug/L
1,1-Dichloroethene	ND	1		ug/L
Methylene Chloride	ND	1		ug/L
t-1,2-Dichloroethene	ND	1		ug/L
1,1-Dichloroethane	ND	1		ug/L
c-1,2-Dichloroethene	ND	1		ug/L
Chloroform	ND	1		ug/L
1,2-Dichloroethane	ND	1		ug/L
1,1,1-Trichloroethane	ND	1		ug/L
Carbon Tetrachloride	ND	1		ug/L
1,2-Dichloropropane	ND	1		ug/L
Trichloroethene	ND	1		ug/L
Bromodichloromethane	ND	1		ug/L
2-Chloroethyl Vinyl Ether	ND	1		ug/L
c-1,3-Dichloropropene	ND	1		ug/L
t-1,3-Dichloropropene	ND	1		ug/L
1,1,2-Trichloroethane	ND	1		ug/L
Dibromochloromethane	ND	1		ug/L
Tetrachloroethene	ND	1		ug/L
Chlorobenzene	ND	1		ug/L
Bromoform	ND	1		ug/L
1,1,2,2-Tetrachloroethane	ND	1		ug/L
1,3-Dichlorobenzene	ND	1		ug/L
1,4-Dichlorobenzene	ND	1		ug/L
1,2-Dichlorobenzene	ND	1		ug/L

<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Chloropropane	109	65-135	
1-Chloro-3-Fluorobenzene	93	65-135	

**Quality Control - Spike/Spike Duplicate**  
EPA 8021A Halogenated VOCs

MS/MSD Batch Number: 03513-1  
Matrix: Aqueous  
Method: EPA 8021A

Instrument: GC 4  
Date Extracted: N/A  
Date Analyzed: 03/20/98

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**Spiked Sample ID: 98-03-513-1**

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Vinyl Chloride	76	88	28-163	15	0-25	
Carbon Tetrachloride	92	101	43-143	9	0-25	
1,2-Dichloropropane	94	104	44-156	10	0-25	
Trichloroethene	93	103	35-146	10	0-25	
Chlorobenzene	90	102	38-150	12	0-25	
1,2-Dichlorobenzene	93	104	0-208	11	0-25	

**Calscience**

**Environmental**

**Laboratories, Inc.**

**Quality Control - Laboratory Control Sample**

EPA 8021A Halogenated VOCs

LCS Batch Number: 980319W  
Lab File ID: MAR19R03  
Matrix: Aqueous  
Method: EPA 8021A

Instrument: GC 4  
Date Analyzed: 03/19/98

**LCS Sample Number: 095-01-032-140**

<u>Parameter</u>	<u>Conc Added</u>	<u>Conc Recovered</u>	<u>%Rec</u>	<u>%Rec CL</u>	<u>Qualifiers</u>
Vinyl Chloride	50	53	105	28-163	
Carbon Tetrachloride	50	54	108	43-143	
1,2-Dichloropropane	50	53	106	44-156	
Trichloroethene	50	54	108	35-146	
Chlorobenzene	50	53	106	38-150	
1,2-Dichlorobenzene	50	54	108	0-208	

## GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 98-03-566

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<u>Qualifier</u>	<u>Definition</u>
ND	Not detected at indicated reporting limit.

TEL: (714) 895-5494 • FAX: (714) 894-7501

## Page 1 of 1

**DISTRIBUTION:** White with final report, Yellow to File, Pink to Client